Puyallup Tribe of Indians

November 27, 2006

Tom Loranger
Department of Ecology
PO Box 47600
Olympia WA 98504-7600

Re: *Comments by the Puyallup Tribe of Indians on the Draft Report of Exam for the Lake Tapps Public Water Supply Project Proposal (S2-29934)*

Dear Mr. Loranger:

These comments are submitted on behalf of the Puyallup Tribe of Indians, a sovereign Indian Tribe whose government is recognized by the United States (the Tribe) and in response to the above-noted Department of Ecology (Ecology) Draft Report of Exam for the Lake Tapps Public Water Supply Project Proposal (Draft ROE).

The Tribe trusts that Ecology will consider these comments against the backdrop of the Tribe's historic role as a steward of the natural environment and in light of the Tribe's current role as co-manager of the fishery and regulator of downstream water quality.

I. Overview

A. The Puyallup Tribe of Indians

The Tribe has existed in and around the Commencement Bay area of Puget Sound since time immemorial. Currently, there are approximately 3,600 enrolled Tribal members residing within the exterior boundaries of the Tribe's highly urbanized Reservation located at the south end of Commencement Bay, near the mouth of the Puyallup River in Pierce County, Washington. All or portions of the cities of Tacoma, Puyallup, and Fife are located within the exterior boundaries of the Reservation. To resolve historical land claim and related disputes within this complex urban setting, in

1989, the Tribe entered into a global settlement agreement with the United States, the state of Washington, and the local city and county governments.[1]

The native salmon of the Puyallup River basin are of great spiritual and cultural significance to the Tribe. Accordingly, the Tribe has acted independently, and in conjunction with state and federal agency partners, to study and implement extensive efforts to preserve and enhance the fishery and fish habitat both within the exterior boundaries of the Reservation and within its treaty protected usual and accustomed fishing areas.[2] Further, the Tribe also acts within the scope of regulatory jurisdiction to protect the fishery and fishery habitat from degradation. For example, the Tribe is currently engaged in revising its water quality standards (WQS) for the surface waters of the Puyallup River held by the United States in trust status for the benefit of the Tribe.

Notwithstanding the efforts of the Tribe and its fishery agency partners, development activities have increased the pressure on the fishery resources and as a result, the spring Chinook salmon is listed as endangered under the federal Endangered Species Act[3] and it is likely that wild steelhead will be listed under the ESA as threatened in the near future.

B. Procedural History

On June 20, 2003 Ecology granted three (3) interrelated water right applications (PSE water rights) to Puget Sound Energy (PSE) so that PSE could secure water rights for the purpose of selling water to meet proposed long-range municipal water needs (industrial and commercial) of the Central Puget Sound region. The PSE Water Rights were based on PSE's 2,000 cfs hydropower water right claim for the White River Project and would allow PSE to continue to divert water from the White River for storage in the Lake Tapps reservoir. In addition, one of the PSE Water Rights provided PSE with authority to take an average of 64.6 million gallons of water per day from Lake Tapps for public use.

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[1] The Puyallup Tribe of Indians Land Claims Settlement Act, 25 U.S.C. § 1773, et seq., Wash. laws, 1989 1st Sess., Ch. 4.

[2] *See United States v. Washington*, 384 F. Supp. 312 (W.D. Wash. 1974), *substantially aff'd in part rev'd in part,* 520 F.2d 676 (9th Cir. 1975), *cert. denied*, 423 U.S. 1086 (1976) ("Boldt I"); *United States v. Washington,* 506 F. Supp.187 (W.D. Wash 1980), *vacated* 759 F.2d 1353 (9 th Cir. 1980) *cert. denied*, 474 U.S. 994 (1985) and *Washington v. Washington State Commercial Passenger Fishing Vessel Ass'n,* 443 U.S. 658 (1979).

[3] 7 U.S.C. 136; 16 U.S.C. 460 et seq. (1973)

PSE and the Cascade Water Alliance (CWA)[4] have entered into a memorandum of understanding to jointly pursue the PSE Water Rights from Ecology so that CWA may use the water from Lake Tapps for a proposed Water Supply Project (WSP). In January 2004, PSE stopped all hydropower operations at the White River Project and subsequently removed all the turbines.

In 2004, the Tribe, along with the Muckleshoot Indian Tribe and the City of Auburn, appealed the initial Report of Examination (ROE) granting PSE's water right applications on various grounds. On June 29, 2004, the Pollution Control Hearings Board (PCHB) heard oral argument on the consolidated appeals. In its August 12, 2004 Order, the PCHB remanded the original ROE case to Ecology and directed that Ecology revise the ROE in light of the cessation of hydropower operations at Lake Tapps. Specifically, the PCHB directed Ecology to create a baseline condition in a revised ROE that reflects non-hydropower conditions. See Order at p.9, line 11.

Ecology revised its ROE and on September 22, 2006 issued a new Draft ROE in response to the PCHB's Order. Ecology requested public comment on this Draft ROE and the comments set out herein are in response to that request.

C. Summary of Comments

The Tribe has significant concerns regarding the accuracy of the information used by Ecology to prepare the Draft ROE and is also concerned with several alleged mitigation components prescribed as conditions of the PSE Water Rights. These concerns are further discussed in Section II. Although Ecology attempted to modify the baseline condition in the Draft ROE as directed by the PCHB; the new baseline does <u>not</u> adequately represent the post-hydropower conditions at Lake Tapps. Ecology's failure to fully comply with the PCHB order and therefore not include an accurate baseline condition in the Draft ROE makes any meaningful analysis of the document by the Tribe, or the reviewing public, highly problematic. Any analysis of the benefits and detriments for the purpose of OCPI balancing test are likewise problematic until such time as Ecology incorporates a valid post-hydropower baseline into the Draft ROE.

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[4] The CWA is a coalition of eight municipalities and made up of City of Bellevue, Covington Water District, City of Issaquah, City of Kirkland, City of Redmond, Sammamish Plateau Water & Sewer District, Skyway Water & Sewer District, City of Tukwila

The Tribe previously proposed minimum flows for the Reservation Reach and operating rules that, we understand, are likely to be incorporated into an agreement among the Tribe, PSE and CWA (Agreed Flow Proposal). Accordingly, the Tribe respectfully requests that the Tribal Agreed Flow Proposal and associated operating rules be incorporated into the Draft ROE. In addition, if the Agreed Flow Proposal is incorporated into the ROE, the MIF Compliant Diversion component, which is intended to mitigate the impact of the WSP on flows in the Puyallup River may be deleted as a condition of the PSE Water Rights as it would be superfluous.

Furthermore, the proposed Source Exchange Program is inconsistent with proper water management within the White River Basin. It penalizes the fishery in the White and Puyallup Rivers for the speculative benefits in other watersheds and should, therefore, be deleted from the ROE.

The analysis in the Draft ROE with regard to the WSP and its impact on the fish and fish habitat within the Reservation Reach is technically invalid. The analysis is based upon outdated studies and on erroneous assumptions about the distribution of fish and the quality of fish habitat within the Reach. An Adaptive Management Plan, akin to that previously proposed to Ecology by the Tribe, is necessary so that adjustments may be made as we become aware of the actual effect of the withdrawal of water for the WSP will have on the ecosystem (for an example, see Exhibit A). Mitigation of those impacts is essential and needs to be provided for in the ROE.

Finally, the Tribe has a number of specific comments that are listed below in Section III.

II. General Comments

A. Baseline Condition

The White River is closed to further appropriations by regulation.[5] Accordingly, Ecology is required to take an extra step, under RCW 90.54.020(3)(a), and must find that there are "overriding considerations of public interest" (OCPI) to override the stream closure before it may issue a water right for the WSP. However, in order for Ecology to conduct the balancing of interests exercise necessary to meet the OCPI test, Ecology must

[5] WAC 173-510-040(3)

first accurately identify the benefits and detriments that are expected to result from the proposed water right.

Thus, the cornerstone of the ROE must be the baseline condition upon which the impacts of a proposed water right for the WSP are established. The baseline condition, therefore, must accurately reflect the current state of the environment so that it may provide for a valid comparison of the expected impacts of the water right. Unfortunately, the Baseline Condition used in the Draft ROE is not valid as it is based on incorrect assumptions and built upon a patchwork of remnants from the old hydropower regime.

1. The Baseline Condition is Ill-Defined

The Draft ROE describes the Baseline Condition as the "scenario of future operations of Lake Tapps Reservoir most likely to occur without the WSP." Draft ROE, lines 1035-1036. A baseline is generally used to determine the impacts, beneficial and detrimental, of a proposed activity under current conditions. Therefore, a baseline condition must represent the current conditions and is not a proposed "scenario" of expected future conditions. As such, the Baseline Condition used in the Draft ROE provides an inadequate basis for analyzing the projected impacts of the WSP.

The Baseline Condition is ambiguous in that it describes diversions of water into Lake Tapps to "maintain lake levels during the recreational season," Draft ROE, line 1047, without defining either the term "lake levels" or the term "recreational season." In fact, the term "recreational level" is a term used inconsistently throughout the Draft ROE. In some instances, it is described as 541.5' to 543' and in others it is 541.5'. Table 7 refers to "Full Pool," which is likewise undefined. "Recreational season" is also used inconsistently. In some instances, it is listed as "Memorial Day to Labor Day," Draft ROE, line 390, and in others it is referred to as "April 15 through October 31," Draft ROE, line 521. At one point, the recreational season is described as "Labor Day to Memorial Day," Draft ROE, line 1324, which is most likely a typographical error. However, we understand that modeling was based on "maintenance of recreational water levels from May 15 to October 31." Draft ROE, line 1134.

It is the Tribe's position that the recreational season is the period of time from Memorial Day to Labor Day and the target elevation of the lake is 541.5'. The maximum elevation of the lake is 543'. References to other time periods and elevations create ambiguity for the operator and the public and must therefore be revised.

2. Premise That Water is Needed to Maintain Lake Water Quality is Incorrect.

The Baseline Condition is based on the incorrect conclusion that it is necessary to divert water from the White River to Lake Tapps for the specific purpose of maintaining the water quality of Lake Tapps. Analysis of water quality data collected by the Tribes, Ecology and the County and studies provided to Ecology by the Muckleshoot Indian Tribe demonstrate that the water quality of Lake Tapps is not improved, and may actually be impaired, by flushing the lake with additional flows from the White River.

Specifically, the analysis performed by Dr. Gene Welsh, PhD, one of the foremost limnologists in the state, concluded that:

(1) Lake Tapps is oligotrophic and has low algae due to low total phosphorus;

(2) A lower inflow rate results in lower lake phosphorus concentrations because: (a) increased detention time increases loss to lake sediment, and (b) the inflow total phosphorus concentration is lower at lower inflow;

(3) A lower inflow rate results in greater transparency; and

(4) There is no apparent benefit of inflow above that which is needed to maintain lake levels.[6]

Given this evidence, the Baseline Condition is fatally flawed. Again, the Baseline should be representative of current conditions and reflect how PSE has been operating the diversion over the past number of years following the cessation of hydropower.

Subsumed in the Baseline Condition is the requirement that the operator would have to perform a water quality study to determine the amount of diversion necessary to maintain lake water quality. For modeling purposes, Ecology set up three scenarios: Baseline, Upper Bound and Lower Bound. The three scenarios present different amounts of water diverted for maintaining water quality in Lake Tapps. The Upper and Lower Bound Scenarios are based upon the assumed results of the water quality study. As noted above, there is sufficient information on the water quality of Lake Tapps right now that demonstrates that no such study is needed. Consequently, the Upper and Lower Bound scenarios should be deleted from the Draft ROE.

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[6] Welsh, Gene. *Effects of Volume on Lake Tapps Water Quality,* undated slides.

3. The Tribe's Revised Water Quality Standards Should be Incorporated in the Baseline Condition.

In its regulatory capacity, the Tribe is currently engaged in revising its water quality standards (WQS) for surface waters, including a portion of the Puyallup River, within and upon trust lands held by the United States for the benefit of the Tribe. The Tribe's revised WQS will be the applicable standards for the lower Puyallup River. Because promulgation of the Tribe's revised WQS is imminent, the Baseline Condition should include the Tribe's revised WQS.[7]

4. The Analysis of Impacts Compares a Hydropower Baseline to the Proposed WSP Conditions

Despite the directive from the PCHB, remnants of the hydropower baseline may still be found scattered throughout the Draft ROE. For instance, at line 1272, the Draft ROE concludes that the WSP would have a beneficial impact to the Reservation Reach. The WSP will remove 100 cfs daily average per year from the Reservation Reach; therefore, the statement on line 1272 is true only in comparison to a hydropower regime. Furthermore, Table 8, which shows the effect of the WSP on average flows in the Reservation Reach, includes the average flow based on "Historical Data." The Historical Data represents average flows when PSE was operating hydropower at Lake Tapps and is not relevant to the analysis. Similarly, water quality modeling is based on a comparison of 2001 data to 2004 data. (See Draft ROE, lines 1824 to 1830). The data from operating year 2001 represents a hydropower regime, which no longer exists and is not relevant.

In addition, the Draft ROE suggests that because more water will remain in the Reservation Reach than previously provided during hydropower generation, the WSP is beneficial to fish productivity. The White River Hydropower Project is no longer being operated and the loss of 100- cfs of water per day for the WSP cannot, by definition, be a benefit to the Reservation Reach. All direct and implied references to conditions under the non-existent and irrelevant hydropower regime must be removed from the Draft ROE.

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[7] In *PUD No. 1 of Jefferson County v. Washington Dep't of Ecology,* the U.S. Supreme Court has recognized a State's ability to condition the exercise of a water right to preserve water quality standards. 511 U.S. 720, 713-714 (1994).

5. The OCPI Balancing Must Be Based Upon an Accurate Baseline Condition.

Because the Draft ROE utilizes a flawed Baseline Condition, the analysis of public interests potentially benefited and harmed by the WSP is likewise faulty and incomplete. Until the deficiencies in the Baseline Conditions identified above are corrected, Ecology cannot fairly conduct the OCPI evaluation and make a valid finding whether or not the WSP is in the best interest of the public. In sum, for Ecology to meet its statutory duty under RCW 90.03.290 and RCW 90.54.020(3)(a), the Baseline Condition must be corrected and the OCPI analysis re-analyzed.

B. The ROE Should Incorporate the Tribe's Flow Proposal for the Minimum Flows for the Reservation Reach

1. The Tribal Agreed Flow Proposal Should Be Incorporated in the Draft ROE and the MIF Compliant Diversion Should be Removed.

The Tribe believes that the protection of and compliance with minimum instream flows (MIF) and water quality standards (WQS) in the Puyallup River are more appropriately addressed by limiting diversion from the White River to Lake Tapps and likewise limiting discharges from Lake Tapps into the Lower White River. Depending on timing of the discharge, a release from Lake Tapps could contribute thermal loads and de-oxygenated water to the thermally-impaired Reach which has no assimilative capacity. Therefore, a flow regime that necessitates discharges from Lake Tapps to meet downstream MIFs may adversely impact WQS and it would be a cumbersome, reactive program that would place additional burdens on the CWA and the WSP.

The Tribal Agreed Flow Proposal, previously submitted to Ecology, was reached through an extensive negotiated process between CWA, PSE and the Tribe. The Agreed Flow Proposal is supported by the Tribe's fishery experts, who have been intensively studying the Reservation Reach and monitoring fish returns for the past twelve years. The collective goal in developing the Agreed Flow Proposal is to provide for an adequate diversion for the WSP and recreational opportunities in Lake Tapps, while providing sufficient flows in the Reservation Reach to maximize fish habitat.

The flows set by the Agreed Flow Proposal are generally higher than the "'modified' Agency 10(j) Flows" that are in the Draft ROE. It has always been the Tribe's position that the 10(j) flows, which were developed as part of the FERC hydropower licensing process, are not scientifically justified, especially in light of the fact that PSE rejected the FERC license and hydropower is no longer being generated.

The Tribe recognizes Ecology's concern that the minimum flows for the Reservation Reach must be defensible. However, the Tribe believes that Ecology would be acting well within its statutory authority, and would be carrying out the State's public trust responsibilities, were it to adopt the higher flows within the Agreed Flow Proposal, which if anything, err on the side of protecting the fishery resources and improving water quality within a reach impaired by thermal loading and other pollutants. It is the Tribe's position that the Agreed Flow Proposal represents the absolute minimum flows necessary to provide adequate habitat for fish in the Reservation Reach.

Ecology has the authority to condition water right permits with instream flows on a stream where there is no administrative regulation setting instream flows.[8] Unlike the Puyallup River, the White River Reservation Reach is not subject to minimum instream flows established by rule. Consequently, the MIFs for the Reservation Reach may be a condition of the water right for the WSP.

Water right permits may be conditioned or denied in order to meet base flows established by regulation.[9] The regulation establishing the instream flows for the Puyallup River Basin states that "[a]ll consumptive water rights hereafter established shall be expressly, subject to instream flows established in WAC 173-510-030 (1) through (3)." WAC 173-510-030(4).

Therefore, the final water right issued by Ecology (Final ROE) must provide for compliance with the Puyallup River MIF. The Agreed Flow Proposal would allow the water right holder to comply with the Puyallup River MIF, as well as the downstream State water quality standards and Tribal water quality standards, by leaving water in the river, rather than running it though Lake Tapps, as would be the case with the MIF Compliant Diversion requirement of the Draft ROE, where it would be subject to impact from additional contaminants, including temperature.

State law provides that perennial streams and rivers shall be retained with base flows necessary to provide for the preservation of wildlife, fish, navigation, scenic,

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[8] *Richert v. Dep't. of Ecology*, PCHB 90-15 (1991) citing *City of Tacoma v. Dep't. of Ecology*, PCHB 86-118 (1989).

[9] *In re Appeals From Water Rights Decisions of the Dep't of Ecology*, PCHB Nos. 96-8 et seq. (1996), citing *Hubbard v. Ecology*, PCHB 93-73 & 103 (1995); *Jones v. Ecology*, PCHB 94-63-66 (1995); *Summers v. Ecology*, PCHB 91-42 (1992); *Plakos v. Ecology*, PCHB 87-38 (1988); *Williams v. Ecology*, PCHB 86-83 (1986); *Denovan v. Ecology*, PCHB 83-215 & 219 (1984).

aesthetic, and other environmental and navigational values.[10] Under state law Ecology has authority to allocate available water among potential uses and users based on securing the greatest benefit to the people of the state.[11] The White River is one of the most pristine rivers in our beautiful State. To date, the White River has not been impacted significantly by development and, with the current increased flows, provides outstanding unaltered habitat for salmon, and bull trout and associated terrestrial wildlife. Thus, maintaining higher flows in the White River, rather than running water through Lake Tapps to meet the Puyallup MIF, will secure the greatest benefit to the natural resources and the citizens of our State.

Finally, Ecology should delete all references in the ROE to the term "Agency 10(j) Flows." 10(j) refers to the Federal Power Act provision, which is no longer applicable in this case since PSE rejected the FERC license. It is the Tribe's position that the Tribal Agreed Flow Proposal and Operation Rules be incorporated into and made a part of the ROE.

2. <u>The Agreed Flow Proposal Provides for a Maximum Diversion That Would Allow the Faster Refill of Lake Tapps.</u>

The Draft ROE currently provides a maximum diversion of 500 cfs from March 1 to May 15 to refill Lake Tapps after the winter drawdown. The Tribe's Agreed Flow Proposal, on the other hand, provides for a maximum diversion of 2,000 cfs, which would permit the lake operator to take advantage of high flow events and quickly fill the Lake. Targeting high flows (> 4,000-cfs) for diversion in the late winter months could greatly reduce the need to divert flow in the spring. Higher refill diversion rates would offset the potential habitat disruption associated with a more protracted refill process during critical juvenile rearing periods. To illustrate this point, it is possible to actually refill the lake to 543' from 515' in only 12 days using the full diversion capacity of 2000-cfs. If however, the refill rate were capped at 500-cfs, as suggested by Ecology, it would require 48 days to refill the reservoir. Such a lengthy refill period could not occur outside the critical emergence and/or rearing season for salmon.

The Tribe supports the concept of a stakeholder management group that would direct the refill and if necessary,[12] the drawdown of the reservoir. Such a management group would consist of technical representatives of the operator, the water right holder, Ecology, Washington Department of Fish and Wildlife, the Tribe and the Muckleshoot

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[10] RCW 90.54.020(3)(a).
[11] RCW 90.54.010.
[12] See Section II.H.

Indian Tribe, as well as experts representing the County and the Lake Tapps Homeowners. These experts would best be able to direct the refill and drawdown of the reservoir in a manner that takes advantage of current weather conditions and the condition of the White River while being protective of fish. Under separate cover, the Tribe has indicated to Ecology and WDFW its support of and enthusiasm for this management concept and looks forward to working with agencies, and other stakeholders, to ensure that the White River water resources are used effectively and efficiently to meet the various needs of the region.

3. The Ramping Rate

The Draft ROE includes ramping rates that were developed during the FERC licensing proceeding and, as such, are outdated and not relevant to the current situation. A ramping rate of one (1) inch per hour for releases from the diversion dam and the tailrace, as proposed in the Agreed Flow Proposal, is more appropriate for the current diversion regime and will provide adequate protection for fish.

C. The Contract Between the Homeowners and PSE Should Not Be Considered in Setting Conditions of the Water Right.

In several places, the Draft ROE references a 2004 agreement between PSE and the Lake Tapps Homeowners (the Homeowners Agreement). Given that the Homeowners have no water right, the Homeowners Agreement amounts solely to a private contract that has no bearing on the existing water right or on the pending water right for the WSP. It is a private agreement that was not prepared in light of the public interest and is subject to change. Consequently, any consideration of the Homeowners Agreement in setting the minimum flows or the conditions and priorities of the water right is contrary to the public interest, is outside the scope of Ecology's authority and must be removed from the Draft ROE.

D. The Change of Use Decision Should Be Clarified

On November 22, 2005, PSE applied to change the use of its 2,000 hydropower water right to include: "recreational reservoir levels, winter reservoir levels to maintain reservoir; protect and enhance fish and wildlife; maintenance of water quality for recreational purposes in the reservoir and to meet other regulatory requirements," to the extent that these purposes are not otherwise already authorized by Ecology. Ecology Change No. 160822.

Ecology is incorporating the change of use in the Draft ROE into the pending water right for the WSP. However, the Draft ROE fails to make the necessary findings on the change of use as required under RCW 90.03.380. It is unclear as to whether the Draft ROE is granting the change of use or whether a subsequent proceeding will occur. If the former is the case, an additional section should be added to the Draft ROE that specifically addresses the change of use, clarifies the relationship between change of use and water right, and contains the statutory requisites for issuing a change of use.

E. The Source Exchange Program (SEP) Provides Unknown and Uncertain Benefits

The Draft ROE lists the Source Exchange Program as one of the main benefits of the WSP water right. However, this assertion is not supported by either sufficient details of the program or substantiation of the supposed ecological benefits. Under Source Exchange, CWA is required to utilize a portion of the WSP to replace existing water supplies within its service area that may impact salmon-bearing streams. However, the source exchange concept is unproven, is not supported under the Water Code and may, in fact, cause more harm than good.

The Tribe knows of no instance in the state where this type of source exchange program has been successfully implemented. Nor does the Draft ROE provide details of how the program would work, what streams would be benefited and how they would be prioritized. Consequently, neither the Tribe nor any other party is in a position to meaningfully evaluate the alleged benefits of the Source Exchange Program.

The Tribe cannot support a program that sacrifices the viability of the fisheries resources of its Usual and Accustomed Area to improve flow to out-of-basin drainages. The White and Puyallup Rivers support two listed species and a third species, steelhead, will soon be added.[13] Given the many problems faced with maintaining viable populations of these fish under present conditions, it is astounding to the Tribe that a source Exchange Program is being touted a mitigation tool. In addition, the goals of the Source Exchange Program are at odds with the goals of the Land Claims Settlement Act, which provides for increased numbers of fish to the basin[14]. This conflict in policy goals is neither identified nor mitigated in the Draft ROE.

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[13] *See*, 64 FR 14307; 70 FR 37160.
[14] Document No. 4, *Puyallup Land Claim Settlement Act*, 25 U.S.C. § 1773, *et seq.*, Wash. Laws, 1989 1st Sess., Ch. 4.

The water allocated for the Source Exchange Program would be put to better use by simply leaving it in the White River and adjusting CWA's water right accordingly. The impacts of the WSP will occur within the Lower White and Puyallup Rivers and the downstream Puyallup Reservation waters; therefore, any potential benefit should be to the White and Puyallup Rivers, not to other basins. In addition, the benefits to the White River are certain, as opposed to the speculative nature of the unknown and undefined benefits of the Source Exchange Program.

Since the cessation of hydropower at Lake Tapps, the Tribe has witnessed marked improvements in the numbers of returning Chinook salmon and the creation of significant new habitat in the Reservation Reach. Keeping source exchange water in the White River, rather than creating what ultimately amounts to a speculative interbasin transfer, will continue those trends and is in the best interest of the public. [15]

F. The Draft ROE Fails to Include an Adaptive Management Provision for the Reservation Reach

The flushing flow study noted in the Draft ROE provides a mechanism for the adaptive management of Lake Tapps to maintain lake water quality. However, the Draft ROE fails to provide equal consideration for the Reservation Reach. The Tribe has proposed and provided to Ecology (Exhibit B attached) an adaptive management regime for the Reach that calls for, *inter alia*, characterization of the lower White River and lower Puyallup River, determination of surface water connectivity to off-channel wetland/habitat areas, residence time of salmonids and growth within wetland mitigation/habitat projects; water quality monitoring; and monitoring of fish returns.

Since the cessation of hydropower operations in 2004, the Reservation Reach has experienced dramatic changes. Due to the multi-year life cycle of salmon, the full impact of the increased flows in the Reservation Reach is not fully known at this time. Consequently, an adaptive management program is needed to study the nature and the extent of the benefits to fish and fish habitat and to determine how best to manage those flows and develop habitat mitigation to maximize those benefits. The Tribe's proposal for an adaptive management regime was previously submitted to Ecology. The Tribe wishes to work with Ecology, WDFW, PSE, CWA and the Muckleshoot Tribe to develop an adaptive management plan for the Reservation Reach to be included in the Final ROE.

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[15] *See* 2004-2005 Annual Salmon Steelhead and Char Report: WRIA 10, 2005-2006 Annual Salmon Steelhead and Char Report: WRIA 10 and Puyallup River Juvenile Salmonid Production Assessment Project 2005, provided to Ecology on November 2, 2006.

G. The Analysis of the Impacts of the WSP Water Right on the Fish and Fish Habitat in the White and Puyallup Rivers is Inaccurate and Incomplete.

1. The Reservation Reach is a Highly Productive Area for Salmon.

The Draft ROE dismisses the Reservation Reach as an unproductive area for salmon. This perception is based, in part, on an outdated concept that the turbidity of the water caused by the glacial flour creates an unfriendly habitat for salmon. The assertion is incorrect. In reality, the Reservation Reach is highly productive.

The Reservation Reach has been surveyed for fish distribution and abundance by the Puyallup Tribe for over ten years. Chinook salmon as well as other species can and do utilize this reach for all freshwater life history needs. When visibility allows Chinook salmon redds are regularly observed in the bypass reach.[16] In fact, channel morphology and geomorphology provide for numerous upwelling areas and side channels that anadromous fish seek and utilize when selecting suitable spawning locations. As a result of the higher flows since 2004, the Tribe anticipates increased utilization of these specific habitat features.

2. The Draft ROE Relies on Studies and Data that Are Not Current and Need to be Updated.

The bulk of Draft ROE's analysis of impacts of the proposed water right on the fish is based upon a 1991 study by USGS that utilized Instream Flow Incremental Methodology (IFIM) modeling. Draft ROE, 2445. The IFIM study evaluated the optimal flow to provide fish habitat based on water depth, velocity, substrate, and cover. This study was conducted fifteen years ago while PSE was operating under a hydropower rule curve; therefore, it does not reflect the current conditions of the Reservation Reach or the current flow regime. Any conclusions of the impact of the WSP on the Reservation Reach that are based on the IFIM Study are inherently flawed.

The Tribe provided Ecology with Herrera Environmental Consultants, Inc.'s 2006 Hydraulic Analysis White River Bypass Reach River Mile 3.6 to 24.3 (Herrera 2006), but the agency failed to incorporate the report's findings in the Draft ROE. In addition, the Herrera is finishing up work on a comprehensive study that utilizes a high-resolution hydraulic model of a 350-meter-long study reach within the middle subreach to assess the

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[16] *Id.*

changes in the quantity of aquatic habitat from artificial decreases in flow below 1000 cfs. The Herrera model was developed through field monitoring, stream gauging, and use a GPS receiver to map side channels, active flow paths and wetted areas, vegetation, gravel bars, wood debris, and sediment texture to produce detailed cross-sections of the floodplain and side channels. Although a similar study was submitted to FERC in 1987, changes in floodplain topography since this time require new cross-sections to augment the recent lidar survey.

As the Tribe has advised Ecology, Herrera expects to complete work on its updated study within the next two months. The Tribe is doing its best to expedite this process and reserves the right to provide Ecology with an initial summary of Herrera's conclusions as soon as it becomes available and with the full report as soon as it becomes available.

3. Draft ROE Fails to Discuss the Impact of the Loss of 100 cfs from Reservation Reach

The WSP will entail an annual loss of 72,400-acre feet of water from the watershed, an average flow of 100-cfs. However, the Draft ROE fails to adequately evaluate the loss of that water from the Reservation Reach, in particular the impact to the spatial component of habitat. Ecology has provided no suggestion or requirement to compensate for the fish production losses associated with the withdrawal.

The total amount of side-channel habitat available throughout the year is reduced as a result of water withdrawal. However, the Draft ROE fails to directly calculate or quantify the area and volume of habitat affected. Absent such information it is difficult to understand how Ecology can acknowledge the diminishment of wetted habitat but not the production losses associated with such flow loss.

For example, the Draft ROE reports that the WSP will reduce the width by 1.9', or 1.8% of wetted habitat, which is very misleading. To better portray the habitat area affected by the WSP, Ecology needs to consider the entire area of the Reach affected by the WSP and provide a spatial representation of this volume. In this case, 34.7 miles of river exist between the diversion dam at Buckley and the mouth of the Puyallup River. This is equal to 183,216 feet of channel length. Multiplying the 183,216 feet of impacted channel by 1.9 feet, and we see that 348,110 square feet or 8 acres of wetted habitat would be lost. If a decrease in stage of 4.6" occurs during the fall low flow period (line 2472), the actual loss is 8-acres containing 500-cfs. Thus, withdrawal of 100 cfs is tremendous loss of system productivity when applied to the 32.7 miles of the affected river.

The omission of a thorough and adequate evaluation of the impact of the loss of 100 cfs on the Reservation Reach makes the balancing of benefits and detriments for the overriding considerations of public interest (OCPI) analysis impossible. The Draft ROE must be revised accordingly.

4. The Draft ROE Fails to Discuss Mitigation Measures for the Loss of Fish and Fish Habitat

Once the loss to fish and fish habitat caused by the withdrawal of 100 cfs daily average for the WSP is determined, mitigation for the loss must be implemented. However, as it is currently written, the Draft ROE contains no discussion of recovery goals, nor does it discuss pending listing of steelhead. The Agreed Flow Proposal softens the impact of the WSP on the Reservation Reach, but the Tribe's Adaptive Management Proposal, discussed in section F above, is necessary to provide for the studies necessary to determine the actual impact of the WSP on fish and fish habitat and provide a mechanism for the development of proper mitigation measures.

5. Fish Screen Study Needs to be Updated for Low Flows

The fish screen facility was not designed for low flow rates but rather diversions up to 2000-cfs. We understand that this facility has not been tested since its inauguration over ten years ago. The Tribe requests a formal re-testing of the facility to ensure that no delay or predation problems arise as a result of sustained low flow operations.

H. Releases from Lake Tapps Should be Eliminated or Subject to an NPDES Permit

The Draft ROE currently places a limitation on diversions from the White River when the minimum instream flows for the Puyallup River are not met. A simpler means to address excursions of the Puyallup MIFs, and to provide needed flows for fish and fish habitat within the Reservation Reach, is to require higher flows in the Reach and minimize or eliminate releases from the reservoir into the Lower White River. The fall drawdown component of the Draft ROE calls for releases of 50 cfs to 300 cfs to meet the Puyallup MIFs. However, releases from Lake Tapps are impaired by high temperature and low dissolved oxygen. Releases of thermally-degraded, low-oxygenated water into the Lower White River will continue to exacerbate thermal loads in a river that is already impaired for temperature and shown to provide limited assimilative capacity for dissolved oxygen in late summer.

Releases from the penstock also create a fish attraction problem for fish, exposing the fish to stranding and predation. Consequently, the Tribe would like the existing penstocks associated with the White River Power House decommissioned from further use. The removal of this feature would necessitate strict attention to diversion rates and eliminate any opportunity to withdraw and release unnecessary flow. Also, it would eliminate the concern over the effects of water quality impaired discharges to downstream reaches and the necessary NPDES permitting for such discharges. Penstock decommissioning would remove of the fish attraction problems that have plagued the tailrace for so long. Ecology should note that the tailrace may be creating on-going takes under the Endangered Species Act.

In the event decommissioning of the penstocks is not feasible due to safety or other concerns, a fish barrier that prevents access to the tailrace must be installed to mitigate the fish attraction problem created by tailrace releases. Quantification of fish losses associated with tailrace attraction has never been documented to the Tribe's satisfaction. The unknown consequences associated with tailrace releases merit study to determine scope of the problem and to identify the most appropriate mitigation measures and the best way to manage flow from the penstocks.

The Draft ROE provides for a Tailrace Discharge Study (Section 5.3.10b), as well as a Water Quality Compliance Plan (Section 5.3.12); however, these conditions are not well defined and fall short of providing water quality regulation and protections necessary to meet downstream water quality and prevent harm to fish. The Water Quality Compliance Plan should require installation of a variable depth intake structure to mitigate the releases of thermally-impaired, low-oxygenated water into the Lower White River. Such a structure can be operated to pull water from lower, cooler elevations of the reservoir. Finally, the Water Quality Compliance Plan must, at a minimum, create requirements and restrictions comparable to an NPDES permit.

I. Meaningful Evaluation of the Draft ROE is Difficult

Finally, the Tribe wishes to note that the fragmented nature of the information and analysis set out in the Draft ROE makes evaluating the document and providing meaningful comments very difficult. As noted above, the Draft ROE contains numerous inconsistencies, as well as remnants from the first ROE that are no longer applicable. In addition, the Draft ROE does not include a concise description of how the Lake Tapps reservoir will be managed prior to and after the initiation of the WSP operations.

III. Specific Comments

The Tribe submits the following specific comments on the Draft ROE.

Line #	Comment
389	Historically, lake level was no higher than 542.5'. Elevation of 543' not possible until 2003 when levees were repaired.
403	The Puyallup Tribe withdrew from intervener status in the FERC proceeding and agreed not to object to the 10(j) flows but did not agree to affirmatively support the 10(j) flows.
416	Reference to diversion of "2,000 cfs or less" is inconsistent with operating rules.
417	The ramping rate should be one (1) inch per hour in Table 1.
442	Clarify the change of use decision. See General Comment II.D.
478	The proposed Water Treatment Plant will need an NPDES permit or the equivalent requirements. Permitting requirements should be discussed. See General Comment II.H.
519 - 526	The reference to the agreement between the Lake Tapps homeowners associations and Puget Sound Energy should be deleted as it is a private contract that has no bearing on the terms and conditions of the water right issued by Ecology. See General Comment II.C. The reference to the recreational season from April 15 to October 31 is inconsistent with the Memorial Day or Labor Day recreational season described at line 390. See General Comment II.A.1.
550	The ramping rate rate should be one (1) inch per hour. See General Comment II.B.3.
556	The mitigation program fails to include any measures to mitigate the impact of the WSP on fish and fish habitat. An Adaptive Management Plan for the Reservation Reach should be added. See General Comment II.G.3 & 4.
559	There are only four components, not five, listed in Section 2.3.4
579	If fish are present in the tailrace during fall drawdown, releases have to meet the appropriate water quality standards. The Tribe believes that no or limited releases are necessary for drawdown if diversions into the lake are minimized. See General Comment II.A.2. and II.H.
625	More information is needed about the operation of the fish screens in the diversion canal. See General Comment II.G.5.
634	Achievement of "desired lake levels for recreation" is not defined. The Tribe's concern is that this reference implicitly incorporates the Homeowners Agreement. Lake level and the recreational season need to be stated.
700 - 811	The Tribe expects the Section on Protests and Comments to be updated with the Tribe's comments contained herein and those that submitted by other parties. The HDR 2003 may not be relevant to the Tribe's concerns. The Tribe reserves the right to further comment on the HDR 2003 memo.
1057	The purpose of the "flushing flow" study is to determine if water is necessary to

	maintain lake quality and, if so, how much water is needed. If the flushing flow study remains in the ROE, the methodology of the study, including QA/QC and peer review, needs to be added. See General Comment II.A.2.
1074	The significance of flushing flows is known at this time. See work prepared by Gene Welsh and Joel Massman provided to Ecology by the Muckleshoot Indian Tribe. See General Comment II.A.2.
1144	What are the "Measures in place to reaerate tailrace discharges and prevent salmonids from entering the tailrace?"
1140	Statement that a new diversion dam will have an efficiency of 95 to 100 percent is not substantiated. Ecology cannot know what the efficiency of the new dam will be until it is constructed.
1146	The reference to hydropower is irrelevant as hydropower is no longer being operated and is no longer a part of the Baseline Condition. Delete "(rather than in hydropower peaks)".
1148	Add the following: • Releases from the reservoir must meet the appropriate water quality standards.
1167	Full pool elevation historically was 542.5 feet. Only after the levees were upgraded in 2003 was it possible to reach a normal full pool elevation of 543 feet.
1189	Where are the elevations measured for the Lower White River?
1190	Where are the elevations measured for the Lower Puyallup River?
1231	The bathymetric study cited is over fifty years old. The study must be updated.
1265	Source exchange needs are not adequately defined in the document. Therefore, the Tribe cannot evaluate the statement that "Sufficient water was available in the baseline scenario to meet water supply and source exchange needs."
1266	Reference to "recreational target elevation." Undefined.
1268	Conclusion that "water would reliably be available for water supply and source exchange even during drought conditions" is not substantiated.
1272	Conclusion that the WSP would have a beneficial impact on the Reservation Reach is based on a comparison of a hydropower Baseline, not the current Baseline. The WSP will have a negative impact on the Reservation Reach because 100 cfs (average) will be removed from the White River.
1285	Conclusion that "the WSP would increase flows to at least 500 cfs to comply with the Modified 10(j) MIF in the Reservation Reach" is based on a comparison of pre-2004 hydro flows in the Reach and not upon current conditions. See General Comment II.A.4.
1296 - 1299	Reference to historic flows is a comparison to hydro flows, which is no longer the baseline. Conclusion that the flow in the Reach is doubled is not accurate and must be deleted. See General Comment II.A.4.
1302	Delete reference to Historical Data. Not relevant as it refers to hydro flows. See General Comment II.A.4.
1304	Statement that "There would be periods when flows in the Reservation Reach

	would decrease as a result of the WSP" is incorrect as it is based upon a hydro baseline. See General Comment II.A.4. The WSP will remove a daily average of 100 cfs from the White River. *Every day* that water is withdrawn from the system, the Reservation Reach is impacted.
1329	Delete reference to Homeowners Agreement. See General Comment II.C
1337	Aspect Consulting 2005 report is not on Reference List
1342	The recreational season described as Labor Day to Memorial Day. It should be Memorial Day to Labor Day. See General Comment II.A.1.
1370	"Recreational target range" is described as April 15 to October 31. The recreational season is Memorial Day to Labor Day. Reference to any other time period is confusing. See General Comment II.A.1.
1379	The "recreational target" elevation is not defined. See General Comment II.A.1.
1413	Reference to "target reservoir elevations". Undefined. See General Comment II.A.1.
1446	The statement that "the 7Q10 and 7Q20 flows increased as a result of the WSP" is based upon a comparison to a hydropower baseline and is incorrect. See General Comment II.A.4.
1477-1500	The Tribe cannot evaluate the conclusions regarding the Puyallup River MIF Excursions without a more detailed description of the Baseline Condition.
1511	Modeling of the reduction of stage in the Puyallup River is ambiguous. What is the geographical reach of the impact? The results of the Herrera study will be provided to Ecology and should be incorporated into the ROE. See General Comment II.G.2.
1529-1532	Comparison should be made to conditions under the WSP to the current conditions without reference to the Homeowners Agreement. See General Comment II.C.
1545	The "current operational levels" are not defined.
1566-68	Conclusion that the Upper and Lower Bound scenarios result in "significantly increased flows in the White River, approximately doubling the flow" is a comparison to a hydro regime and must be deleted. See General Comment II.A.4.
1587;1597; 1610	Aspect Consulting 2005 report not on reference list.
2009	"Without the WSP, up to 55 percent of the lake's water would be replaced by fresh inflow each summer." What flow regime is this based on?
2031	Water quality in the lower White is controlled by water quality in the Reservation Reach and upstream sources.
2043	"WSP will improve water quality over the baseline condition by limiting tailrace discharges to the river." What is the baseline?
2155	Bull trout exist throughout the watershed including the Reservation Reach. Delete rest of paragraph.
2308	Low flow issues did arise in many places as result of drought conditions in 2001. However, we are not aware of WDFW ever suggesting that water from the White

	River be used to alleviate such problems.
2348	"Little spawning occurs in affected reaches because of the nature of the river morphology and geomorphology" is an incorrect statement. See General Comment II.G.1.
2357	Change State WSQ for temperature from 18°C to will be 16°C.
2372-76	Statement regarding flows are which fish habitat peaks is incorrect. One of the primary reasons of historic low productivity below the tailrace is the disruption of flow patterns caused by power peaking cycles over 90 years. Ramp cycle changes of as much as 2000-cfs are not conducive to the establishment and support of spawning habitat. (See excerpted USGS gage reading attached as Exhibit C). Redds constructed within this reach would be subject to daily inundation and desiccation cycles, which over time have resulted in the extirpation of any and all stocks formerly utilizing this habitat. As a result of more favorable flow conditions since the cessation of hydro, we anticipate the gradual reutilization of spawning areas within the lower White and Puyallup Rivers. The statement that the Reach is a low use spawning area for Chinook is incorrect. See General Comment II.G.
2379	500-cfs will not provide 90% of peak habitat flow. The paragraph previous to this line references outdated IFIM work that reported 900-cfs provided peak spawning habitat. If we correctly apply the argument being made in this discussion than a 500-cfs flow rate provides only 55% of the available spawning habitat. DOE must than admit that the reciprocal of this value or 45% of the spawning habitat is therefore lost through inadequate instream flows. See General Comment II.G.
2389	The statement that there are only a few shallow spawning bars in the lower Puyallup River are incorrect and mischaracterizes the spawning potential for the Puyallup. See General Comment II.G.1.
2390	The intent and direction of this comment are unclear. The Tribe believes that the low spawning utilization in the lower river is due to past power peaking cycles and the disruption associated with this practice, not some link between sport fishing and spawning avoidance .
2393	Authors must cite the specific preference curves applied. From where were these curves developed and which specie(s) are they being applied?
2396	As far as the Puyallup Tribe is aware, there has been no recent IFIM modeling of flows in the system. Please reference the study and date of the data used in the ROE.
2434	The latest findings (*Hydraulic Analysis White River Bypass Reach River Mile 3.6 to 24.3*, Herrera 2006) on wetted channel width and area should be incorporated in the WSP affects analysis. See General Comment II.6.2.
2447	To report only that the WSP will reduce the width by 1.9' is very misleading. See General Comment II.G.3.
2495	This is not a complete sentence nor is it apparent where the discussion is headed.

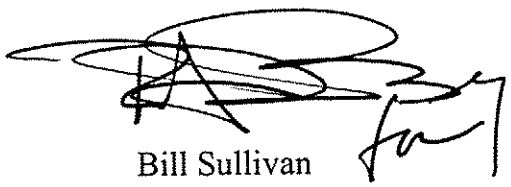
2831	For comparative purposes it is important to note that the largest salmon hatcheries in the world (Coleman, Cowlitz, Dworshak, Nitinat, and Robertson Creek), operate on flow rates around 100-cfs. Such facilities are capable of producing over 10,000,000 smolts annually.

IV. Conclusion

For the reasons set out above, the Tribe respectfully requests that the Draft ROE be revised. Moreover, the Tribe requests that the Tribal Agreed Flows proposed be incorporated into and made a part of the ROE. Further, the Tribe requests the opportunity to supplement this letter in with the original reports, including the pending Herrera report, identified herein. Finally, the Tribe requests the opportunity to meet with Ecology, the County PSE, the MIT and Pierce County to assist Ecology in making necessary revisions to the Draft ROE including incorporation of the Tribal Agreed Flows and other key provisions .

Please note, that by its submission of these comments, the Tribe reserves all of its rights and does not waive or diminish its reserved water rights or its treaty protected rights and entitlements.

Sincerely,
Puyallup Tribe of Indians



Bill Sullivan
Director Environmental Programs

cc: Tribal Council
Tribal Fisheries
Tribal Water Quality
John Bell, Law Office
Richard A. Du Bey, Special Environmental Counsel

EXHIBIT A

EXHIBIT A

(9/22/06)

The White River Water Right for a Water Supply Project

I. Adaptive Management Flow Proposal

A. Interim Period

The interim period of time subsequent to issuance of the water right for the proposed Water Supply Project (WSP), but prior to operation of the WSP is referred to herein as the "Interim Period". As further described below, Ecology, the recipient of the water right, (the Permit Holder), the Puyallup Tribe of Indians (Tribe) and other interested parties shall use the Interim Period to study the affects of the flows and conditions prescribed in the Record of Examination (ROE) on the development of fish habitat in the Bypass Reach and the maintenance of water quality standards (WQS) in Lake Tapps, the White River and the Lower Puyallup River.

B. Flows During the Interim Period

1. For the first three (3) years following the issuance of the water right, the Permit Holder shall conduct the Lake Tapps Water Quality Study according to Section 5.3.10a. [of the ROE]. It is presumed that no flushing flows need be diverted into Lake Tapps for the purpose of maintaining WQS in Lake Tapps (Flushing Flows). If the Lake Tapps Water Quality Study determines that Flushing Flows are not required to maintain WQS in Lake Tapps, the Flushing Flows shall be dedicated to instream flows at the conclusion of the study period. If the Lake Tapps Water Quality Study determines that some or all of the Flushing Flows are necessary to maintain WQS in Lake Tapps, the Permit Holder may be permitted to divert that portion of the Flushing Flows necessary to maintain WQS in Lake Tapps, up to the total amount of the Flushing Flows. The balance of any unused Flushing Flows shall be dedicated to instream flows.

2. During the Interim Period, the Permit Holder shall operate the diversion according to the terms and conditions prescribed in the ROE, provided that, actual flows in the Bypass Reach, during the Interim Period, shall be equivalent to the Agreed Flow Proposal and Operation Rules provided to Ecology by the Tribe in consultation with the Cascade Water Alliance (CWA), Puget Sound Energy (PSE) and the Muckleshoot Indian Tribe (MIT) and attached as Exhibit A. In addition, as noted above in B.1., it is presumed that the Flushing Flows shall be dedicated to instream flows

at the conclusion of the Lake Tapps Water Quality Study. The actual flows in the Bypass Reach during the Interim Period are referred to as the Interim Flows.

C. Bypass Reach Study

1. To study the effects of the Interim Flows on wetted habitatthe Permit Holder, in consultation with Ecology, and the Consulting Agencies shall develop and implement the following studies below. (The Tribe, the Washington Department of Fish and Wildlife (WDFW), the National Marine Fisheries Service (NMFS), and the MIT are collectively referred to as the "Consulting Agencies.")

a. Characterization of the lower White River and lower Puyallup River, and the geographic scope of the Project, or "Study Area" including channel conditions, cross sections, sediment transport, and geomorphology (which shall include channel-forming processes necessary for overbank flows and recharge of groundwater/hyperoeic zone);

b. Determination within the Study Area of functional impacts of completed and proposed wetland/habitat areas;

c. Determination within the Study Area of surface water connectivity to off-channel wetland/habitat areas;

d. Determination within the Study Area of residence time salmonids and growth within wetland mitigation/habitat projects;

e. Monitoring within the Study Area of water quality and determination of impacts to thermal regimes, dissolved oxygen concentrations, pH, and other water quality parameters in the White River and the Puyallup River;

f. Monitoring fish returns within the Study Area;

g. Additional studies within the Study Area to be determined, as necessary.

2. Each entity or consultant that is conducting a study or studies pursuant to Section C.1. above shall contemporaneously provide each of the Consulting Agencies, with copies of the data generated on wetted habitat, fish returns, and water quality during the Interim Period.

D. Panel of Experts

1. Within one (1) year following the issuance of the water right, the Permit Holder, shall establish a panel of scientific experts (the Expert Panel) to first study and then make a recommendation to Ecology regarding the minimum instream flow that should be set by Ecology, within the Bypass Reach, for the month of August.

2. The Expert Panel shall consist of qualified experts selected as follows:

a. The Consulting Agencies and Ecology shall each appoint one fishery expert;

b. The Permit Holder, the Tribe, and the MIT shall each appoint one hydrologist;

c. The Permit Holder, the Tribe, and the MIT Tribe shall each appoint one water quality specialist;

d. Pierce County shall appoint one representative.

3. Recommendation of the Expert Panel

a. Twenty-four(24) months prior to the operation of the WSP , the Expert Panel shall assemble all data collected as a part of the Bypass Reach Study, noted above in paragraph C.1., and shall use best efforts to reach a consensus on the recommended in-channel flow for the month of August. (Expert Panel Recommendation). In the event that consensus cannot be reached, a majority and a minority report may be sent to Ecology. The Expert Panel Recommendation shall be delivered to Ecology no later than eighteen (18) months prior to the operation of the WSP.

b. The Expert Panel Recommendation shall include, but not be limited to the following criteria: impacts of the Increased Flows on the Bypass Reach, including, but not limited to, wetted habitat, deep pools, side channels, spawning beds, gravel, sediment, woody debris, and water quality criteria; impact of flows on the level of Lake Tapps; and efforts taken, in accordance with the Lake Maintenance and Enhancement Plan described further below in Section G.2. to enhance the recreational opportunities at Lake Tapps.

c. Any time during the Interim Period, the Expert Panel may, in its discretion, make recommendations to the appropriate entities regarding the following:

(1) potential habitat enhancement and restoration projects in the White and Puyallup Rivers;

(2) point source and nonpoint source pollution controls along the White River and Lake Tapps;

(3) enhancements to Lake Tapps to improve recreational opportunities.

E. Ecology Review of Panel Recommendation

1. Based upon its review of the Expert Panel Recommendation, Ecology shall establish the minimum instream flows in the Bypass Reach for the month of August (August MIF). The August MIF shall be set at a number no lower than 500 cfs and no higher than 650 cfs.

2. In establishing the August MIF, Ecology shall consider the following criteria within the Study Area:

a. Functional impacts of the wetland/habitat areas created during the Interim Period;

b. Surface water connectivity to off-channel wetland/habitat areas created by the Increased Flows;

c. Water quality impacts to the White River and the Puyallup River, including impacts to thermal regimes, dissolved oxygen concentrations, pH, and other water quality parameters;

d. Fish returns;

e. Economic benefits to region due to improvements to fishery related to the Increased Flows;

f. Impacts on recreational levels of Lake Tapps.

F. Lake Enhancement and Maintenance Plan

a. The water level of Lake Tapps affects the ability of the public to safely use Lake Tapps for recreational purposes. Increased flows in the Bypass Reach o benefit fisheries, the operation of the WSP and recreational use of Lake Tapps can all be obtained as a result of activities to be undertaken in and about Lake Tapps that will contribute to improving and maintaining the Lake. The Lake Enhancement and Maintenance Plan is intended to accomplish these goals and objectives.

b. The Permit Holder, in conjunction with Pierce County and the Lake Tapps Homeowners, shall, within twenty-four (24) months after issuance of the water right, submit to Ecology and the Consulting Agencies a Lake Enhancement and Maintenance Plan (Lake Enhancement Plan). The Lake Plan shall provide for:

(1) designation of priority treatment areas (PTAs) within Lake Tapps within which, annual deepening of the PTAs may be conducted during the winter draw-down or at other times agreeable to Ecology;

(2) designation of areas within Lake Tapps where removal of tree stumps, that pose a hazard to boaters, swimmers and others recreating in

Lake Tapps (Removal Areas). Activities within these designated Removal Areas shall take place during the winter draw-down or at other times agreeable to Ecology. To the extent feasible, suitable clean materials removed from the Lake Tapps' Removal Areas shall, with the approval of the Consulting Agencies, be placed in the White River, below the Diversion Dam, to enhance fish habitat;

(3) the enforcement of the Boat Management Plan developed by the Lake Tapps Boat Management Plan Team (LTBMP Team). The LTBMP Team was established by Pierce County Council Resolution 2004-91.

c. Pierce County shall develop, implement and enforce a non-point source management plan, for the Lake Tapps area to address and mitigate current and future impacts of non-point source discharges in and about Lake Tapps and the resulting direct and indirect impact on the water quality of Lake Tapps.

EXHIBIT B

EXHIBIT B

(9/22/06)

The White River Water Right for a Water Supply Project

I. Adaptive Management Flow Proposal

A. Interim Period

The interim period of time subsequent to issuance of the water right for the proposed Water Supply Project (WSP), but prior to operation of the WSP is referred to herein as the "Interim Period". As further described below, Ecology, the recipient of the water right, (the Permit Holder), the Puyallup Tribe of Indians (Tribe) and other interested parties shall use the Interim Period to study the affects of the flows and conditions prescribed in the Record of Examination (ROE) on the development of fish habitat in the Bypass Reach and the maintenance of water quality standards (WQS) in Lake Tapps, the White River and the Lower Puyallup River.

B. Flows During the Interim Period

1. For the first three (3) years following the issuance of the water right, the Permit Holder shall conduct the Lake Tapps Water Quality Study according to Section 5.3.10a. [of the ROE]. It is presumed that no flushing flows need be diverted into Lake Tapps for the purpose of maintaining WQS in Lake Tapps (Flushing Flows). If the Lake Tapps Water Quality Study determines that Flushing Flows are not required to maintain WQS in Lake Tapps, the Flushing Flows shall be dedicated to instream flows at the conclusion of the study period. If the Lake Tapps Water Quality Study determines that some or all of the Flushing Flows are necessary to maintain WQS in Lake Tapps, the Permit Holder may be permitted to divert that portion of the Flushing Flows necessary to maintain WQS in Lake Tapps, up to the total amount of the Flushing Flows. The balance of any unused Flushing Flows shall be dedicated to instream flows.

2. During the Interim Period, the Permit Holder shall operate the diversion according to the terms and conditions prescribed in the ROE, provided that, actual flows in the Bypass Reach, during the Interim Period, shall be equivalent to the Agreed Flow Proposal and Operation Rules provided to Ecology by the Tribe in consultation with the Cascade Water Alliance (CWA), Puget Sound Energy (PSE) and the Muckleshoot Indian Tribe (MIT) and attached as Exhibit A. In addition, as noted above in B.1., it is presumed that the Flushing Flows shall be dedicated to instream flows

Time Period	MF	Time Period	MF
January 1-14	650 cfs	July 1-14	800 cfs
January 15-31	525 cfs	July 15-31	800 cfs
February 1-14	550 cfs	August 1-14	500- 650 cfs
February 15-29	500 cfs	August 15-31	500 - 650 cfs
March 1-14	550 cfs	September 1-14	500 cfs
March 15-31	725 cfs	September 15-30	500 cfs
April 1-14	775 cfs	October 1-14	500 cfs
April 15-30	825 cfs	October 15-31	500 cfs
May 1-14	875 cfs	November 1-14	500 cfs
May 15-31	875 cfs	November 15-30	550 cfs
June 1-14	800 cfs	December 1-14	550 cfs
June 15-30	800 cfs	December 15-31	600 cfs

4. Rule 2. When the in-channel surface flow of the White River below the Diversion Dam exceeds the MF, but does not exceed the in-channel surface flow set forth below, the Diversion Dam may be operated to provide inflow to the Lake Tapps Reservoir in an amount not to exceed 400 cfs ("Minimum Reservoir Inflow"):

Time Period	Rule 2 Flow	Time Period	Rule 2 Flow
January 1-14	1100 cfs	July 1-14	1400 cfs
January 15-31	1100 cfs	July 15-31	1275 cfs
February 1-14	1100 cfs	August 1-14	1150 cfs
February 15-29	1150 cfs	August 15-31	1050cfs
March 1-14	1200 cfs	September 1-14	975
March 15-31	1250 cfs	September 15-30	500 cfs

Time Period	Rule 2 Flow	Time Period	Rule 2 Flow
April 1-14	1300 cfs	October 1-14	500 cfs
April 15-30	1350 cfs	October 15-31	500 cfs
May 1-14	1400 cfs	November 1-14	500 cfs
May 15-30	1400 cfs	November 15-30	550 cfs
June 1-14	1400 cfs	December 1-14	1000 cfs
June 15-30	1400 cfs	December 15-31	1050 cfs

5. Rule 3. When the in-channel surface flow of the White River below the Diversion Dam exceeds the in-channel surface flow stated by Rule 2 above, the Diversion Dam may be operated to provide additional inflow to the Lake Tapps Reservoir, but the amount of such additional inflow shall not exceed the maximum reservoir inflow to the Lake Tapps Reservoir stated below (the "Maximum Reservoir Inflow"):

Time Period	Maximum Reservoir Inflow	Time Period	Maximum Reservoir Inflow
January 1-14	650 cfs	July 1-14	800 cfs
January 15-31	650 cfs	July 15-31	800 cfs
February 1-14	2000 cfs	August 1-14	800 cfs
February 15-29	2000 cfs	August 15-31	800 cfs
March 1-14	2,000 cfs	September 1-14	800 cfs
March 15-31	1,000 cfs	September 15-30	800 cfs
April 1-14	1,000 cfs	October 1-14	800 cfs
April 15-30	1,000 cfs	October 15-31	800 cfs
May 1-14	1,000 cfs	November 1-14	650 cfs
May 15-30	1,000 cfs	November 15-30	650 cfs
June 1-14	1,000 cfs	December 1-14	650 cfs

Time Period	Maximum Reservoir Inflow	Time Period	Maximum Reservoir Inflow
June 15-30	1,000 cfs	December 15-31	650 cfs

6. Rule 4. The Diversion Dam may operated, subject to Rules 1, 2 and 3 above, with the further objective of providing sufficient water for beneficial uses by maintaining the target reservoir levels set forth below (the "Target Reservoir Level"):

   a. Between December 1 and February 1 the Lake Tapps Reservoir target water surface elevation is 530' msl;

   b. Between February 2 and April 30 the Lake Tapps Reservoir target water surface elevation may increase to 541.5 to 543' msl;

   c. Between May 1 and September 6 the Lake Tapps Reservoir target water surface elevation is 541.5 to 543' msl; and

   d. Between September 7 and November 30 the Lake Tapps Reservoir target water surface elevation may decrease to 530' msl.

EXHIBIT C

Exhibit C

USGS

12101500-- Puyallup River at Puyallup

Station Description

```
Station name:  PUYALLUP RIVER AT PUYALLUP
Latitude (degrees, minutes, and seconds)..... 471252
Longitude (degrees, minutes, and seconds)..... 1222025
State Code..... 53
County Code..... 053
Hydrologic Unit Code..... 17110014
Drainage Area (square miles).....   948.00
Gage Datum (feet above NGVD).....
----Period(s) of Record----
1 1914.05.01-1927.05.31
2 1927.08.01-Current
```

The National Weather Service Flood Stage for this station is 30.0 feet.

Current Conditions

Flow (ft^3/s)	Stage (ft)	Date	Time
3,100	11.65	07/16	13:00

Streamflow -- download presentation-quality graph